

REMARKS

Claims 1-11 are pending in the patent application. Claims 8-11 are being withdrawn without prejudice as a result of the restriction requirement. Claims 1 and 6 have been amended. New claims 12-13 have been added to the application. Support for these amendments and claims may be found, for example, in the originally-filed claims; col. 6, line 22- col. 7, line 30; FIGs. 5-7 of the patent application. Claims 1-7 and 12-13 now remain in the application. Therefore, no new matter has been entered. Reconsideration of the claims in view of the following remarks is respectfully requested.

I. Restriction Requirement

The Applicants are affirming the election of claims 1-7 made during a telephone conversion with the Examiner. Claims 8-11 are being withdrawn without prejudice as a result of the restriction requirement.

II. Information Disclosure Statement (IDS)

The Applicants filed an IDS of the above-identified application on June 18, 2001 (a copy of the filed IDS and acknowledgement postcard is included with this reply). These references are believed to be the same as filed in the application that issued as U.S. Patent No. 6,261,504. The Examiner is respectfully requested to review these references and make them of record. No fee is believed to be due since the IDS was filed within three months of the application being filed.

III. 35 U.S.C. § 103(a) Rejections

Claim 1 has been amended to recite that the mold forms a reverse draft for a thermoformed foam and that the mold is a matched mold. Claim 6 previously recited that the mold is for "thermoforming undercuts into foam parts" and has been amended to recite that the mold is a matched mold.

The applied reference of U.S. Patent No. 3,879,159 to Smith ("Smith") does not teach or suggest the features recited in independent claims 1 and 6. First, Smith does not disclose a matched mold as required by amended independent claims 1 and 6. Rather, Smith discloses

using an assist-plug and pivotable mold parts 37, 38 for forming the liner sections 11, 12 that are not matched. *See, e.g.*, FIGs. 3-7.

Second, Smith does not disclose both a (a) male plug that includes a “female form key” and (b) “female cavity that includes a male form key” as recited in both independent claims 1 and 6. The Office Action identifies a “male plug 35 and a female form (formed by cooperation of pivotable mold parts 37 and 38)” in which the “mold include[es] a male form 42”. Smith identifies element 35 as being an “assist-plug 35” at col. 3, lines 47-54. To avoid any potential confusion, the Applicants will refer to element 35 in the same manner as in Smith.

In Smith, the pivotable mold parts 37, 38 act as a male plug with respect to the sheet of thermoplastic material M (shown in broken lines in FIG. 3). *See* col. 3, lines 39-42 and FIG. 3 of Smith. The assist-plug 35 in Smith, however, is not a “female cavity [that] include[es] a male form key and a second fluid driven actuator for actuating said male form key.” The assist-plug 35 of Smith does not have a female cavity, a male form key, or a fluid driven actuator.

Third, Smith does not disclose a mold for thermoforming a reverse draft or undercut into a foamed part. Rather, Smith discloses forming “a refrigerator cabinet 10 [that] includes a pair of compartments having unidirectionally presented openings, and defined by a pair of linear [sic, liner] sections 11 and 12. The liner sections are made of thermoplastic material, such as for example, ABS resin, and are molded as an integral structure from a single flat sheet of such material, in accordance with the invention to be described in detail below.” Col. 2, lines 39-46 and FIG. 1 of the Smith patent. The only apparent disclosure in Smith that mentions foam is with respect to the thermal insulation 13 that may fill the space between the confronting walls of liner sections 11 and 12. *See* FIG. 1 and col. 2, lines 47-50.

Therefore, it is believed that claims 1 and 6 are not obvious over the Smith patent and, thus, should be in a condition for allowance. Claims 2-5 and 7, which depend directly on independent claim 1 or 6, should also be allowable for at least the same reasons.

IV. New Independent Claim 12

Independent claim 12 recites, *inter alia*, a first mold cavity that includes a male form key and a first fluid driven piston, and a second mold half that includes a male plug and a second fluid driven piston. The male and female form key move to their respective second positions so as to form the reverse draft in the thermoformed part. Smith does not teach or suggest such


limitations. For example, Smith does not have a female cavity, a male form key, or a fluid driven piston. Additionally, as discussed above, Smith does not disclose a mold for thermoforming a reverse draft or undercut into a foamed part.

Therefore, it is believed that claim 12 is not obvious over the Smith patent and, thus, should be in a condition for allowance. Dependant claim 13, which depends directly on claim 12, should also be in condition for allowance for at least the same reasons. Additionally, Smith does not teach or suggest a male form key that includes a portion in a configuration that corresponds to the configuration of the reverse draft to be formed in which the female form key includes a portion complimentary to the portion of the male form key.

Conclusion

The Applicants submit that the claims are in a condition for allowance and action toward that end is earnestly solicited. A check in the amount of \$110.00 is enclosed for a one-month extension of time. Should any additional fees be required (except for payment of the issue fee), the Commissioner is authorized to deduct the fees from Jenkins & Gilchrist, P.C. Deposit Account No. 10-0447, Order No. 47097-01072USP1.

Respectfully submitted,



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